



IFW

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q72256

Susumu KAYAMA, et al.

Appln. No.: 10/529,751

Group Art Unit: 2812

Confirmation No.: 1597

Examiner: Not Yet Assigned

Filed: March 30, 2005

For: TITANIUM OXIDE FOR DYE-SENSITIZED SOLAR CELLS

REQUEST FOR CORRECTED OFFICIAL FILING RECEIPT

ATTN: Office of Initial Patent Examination
Filing Receipt Correction
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

We enclose a copy of the Official Filing Receipt for the above-identified application and request the following corrections:

Assignment for Published Patent Application: SHOWA DENKO K.K.

Foreign Applications: JAPAN 2003-169421 ~~09/13/2003~~ 06/13/2003

JAPAN 2003-320123 ~~07/23/2003~~ 09/11/2003

Title: ~~Metal oxide structure containing Titanium oxide and production method and use thereof.~~ Titanium oxide for dye-sensitized solar cells

Verification for the requested corrections is indicated on the Declaration and Assignment both filed March 30, 2005.

Respectfully submitted,

Sheldon I. Landsman
Registration No. 25,430

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: May 25, 2006



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
✓ 10/529,751	03/30/2005	2812	✓ 2460	Q72256	3	32	4

CONFIRMATION NO. 1597

23373
 SUGHRUE MION, PLLC
 2100 PENNSYLVANIA AVENUE, N.W.
 SUITE 800
 WASHINGTON, DC 20037

FILING RECEIPT



OC000000017312314

Date Mailed: 10/25/2005

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

Applicant(s)

- ✓ Susumu Kayama, Toyama, JAPAN;
- ✓ Hisao Kogoi, Toyoma, JAPAN;
- ✓ Jun Tanaka, Chiba, JAPAN;

Assignment for Published Patent Application: SHOWA DENKO K.K.

Power of Attorney: The patent practitioners associated with Customer Number 23373.

Domestic Priority data as claimed by applicant

- ✓ This application is a 371 of PCT/JP03/12554 09/30/2003
 - ✓ which claims benefit of 60/416,919 10/09/2002
 - ✓ and claims benefit of 60/489,109 07/23/2003 *
- (*)Data provided by applicant is not consistent with PTO records.

Foreign Applications

- ✓ JAPAN 2002-285334 09/30/2002
- ✓ JAPAN 2003-169421 09/13/2003
- ✓ JAPAN 2003-197672 07/16/2003
- ✓ JAPAN 2003-320123 07/23/2003

→ JAPAN 2003-169421 06/13/2003
→ JAPAN 2003-320123 09/11/2003

Projected Publication Date: 02/02/2006

Non-Publication Request: No

Early Publication Request: No

Title

Metal oxide structure containing Titanium oxide and production method and use thereof

Preliminary Class
438

Titanium oxide for Dye-sensitized solar cells

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted

under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

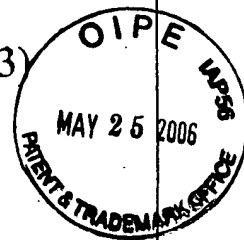
NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

DECLARATION AND POWER OF ATTORNEY FOR UTILITY OR DESIGN PATENT APPLICATION (37 C.F.R. 1.63)

実用・意匠特許出願宣言書および委任状 (37 C.F.R. 1.63)

Japanese Language Declaration



私は以下の通り宣言します：

I hereby declare that:

各発明者の住所、郵送先、および国籍は下記氏名の後に記載された通りです。

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

下記名称の発明に関し請求範囲に記載され特許出願がされている発明内容につき、下記に記載された発明者が本来かつ最初の発明者であると信じます。

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

TITANIUM OXIDE FOR DYE-SENSITIZED
SOLAR CELLS

☐ 上記発明の明細書は本書に添付されます。

☐ the specification of which is attached hereto

または

OR

☐ 上記発明は米国出願番号あるいはPCT国際出願番号
_____ (確認番号 _____) として _____
年__月__日に出願され、
_____年__月__日に補正されました (該当
する場合)。

☒ was filed on September 30, 2003
as United States Application Number or PCT
International Application Number PCT/JP03/12554
(Confirmation No. _____),
and was amended on _____
(if applicable).

私は補正が上に明示された場合は補正された特許請求範囲を含む前記明細書の内容を検討し、理解していることをここに表明します。

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

私は一部継続出願の場合先行出願の出願日から一部継続出願の国内あるいはPCT国際出願日までの期間中に入手された重要な情報を含み、37 C.F.R. 1.56に定義される特許性に肝要な情報について開示義務があることを認めます。

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part application(s), material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Japanese Language Declaration

私は35 U.S.C. 119(a)-(d) あるいは (f),
または365(b)に基づき特許、発明者、あるいは植物育種
家証書の下記外国出願、または365(a)に基づきアメリカ
合衆国以外の少なくとも1ヶ国を指定した下記PCT国際出
願についての外国優先権特典をここに主張するとともに
、下記項目にx印を付けることにより優先権を主張する出
願以前の出願日を有する特許、発明者、あるいは植物育
種家証書の外国出願またはPCT国際出願を示します。

Prior Foreign Application Number(s)
先行外国出願番号

2002-285334 (Pat. Appln.) Japan

(Application Number) (Country)
(出願番号) (国名)

2003-169421 (Pat. Appln.) Japan

(Application Number) (Country)
(出願番号) (国名)

私は35 U.S.C. 119(e)に基づき下記の米国仮特許出願の国内
優先権をここに主張します。

60/416,919 9/October/2002

(Application Number) (Filing Date)
(出願番号) (出願日)

60/489,109 23/July/2003

(Application Number) (Filing Date)
(出願番号) (出願日)

私は35 U.S.C. 120に基づき下記米国特許出願、あるいは
365(c)に基づき米国を指定する下記PCT国際出願の利益を
ここに主張し、本特許出願内特許請求範囲の各項目の内
容が35 U.S.C. 112の最初の項に規定される方法により先
行米国あるいはPCT国際特許出願で開示されていない限り
において37 C.F.R. 1.56に定義される本出願の特許性に
肝要で、先行特許出願の出願日から本特許出願の国内
あるいはPCT国際出願日までの期間中に入手された情報
について開示義務があることを認めます。

Prior U.S. or International Application Number(s)
先行米国あるいは国際出願番号

(Application Number) (Filing Date)
(出願番号) (出願日)

(Application Number) (Filing Date)
(出願番号) (出願日)

私は本宣言書内で私自身の知識に基づいてなされたすべ
ての陳述が真実であり、情報および信ずるところに基づ
いてなされたすべての陳述が真実であると信じられてい
ることをここに宣言し、さらに故意になされた虚偽の陳
述等々は18 U.S.C.

1001に基づき罰金あるいは拘禁または両方による処罰に
あたり、またかような故意による虚偽の陳述はそれに基づ
く特許出願あるいは成立特許の有効性を危うくする可
能性があることを認識した上でこれらの陳述をなしたこ
とを宣言します。

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-
(d) or (f), or 365(b) of any foreign application(s) for patent,
inventor's or plant breeder's rights certificate(s), or 365(a) of
any PCT international application(s) which designated at least
one country other than the United States of America, listed
below and have also identified below, by checking the box, any
foreign application(s) for patent, inventor's or plant breeder's
rights certificate(s), or any PCT international application(s)
having a filing date before that of the application on which
priority is claimed.

Priority Claimed?
優先権の主張?

Yes No
有り無し
☒ ☐

30/September/2002

(Filing Date)
(出願日)

13/June/2003

(Filing Date)
(出願日)

☒ ☐

I hereby claim domestic priority under 35 U.S.C. 119(e) of any
United States provisional application(s) listed below.

I hereby claim benefit under 35 U.S.C. 120 of any United States
application(s) or 365(c) of any PCT international application(s)
designating the United States, listed below and, insofar as the
subject matter of each of the claims of this application is not
disclosed in a listed prior United States or PCT international
application in the manner provided by the first paragraph of
35 U.S.C. 112, I acknowledge my duty to disclose any
information material to the patentability of this application as
defined in 37 C.F.R. 1.56 which occurred between the filing
date of the prior application and the national or PCT
international filing date of this application:

(Status: patented, pending, abandoned)
(状態: 特許成立済、係属中、放棄済)

(Status: patented, pending, abandoned)
(状態: 特許成立済、係属中、放棄済)

I hereby declare that all statements made herein of my own
knowledge are true and that all statements made on information
and belief are believed to be true; and further that these
statements were made with the knowledge that willful false
statements and the like so made are punishable by fine or
imprisonment, or both, under 18 U.S.C. 1001 and that such
willful false statements may jeopardize the validity of the
application or any patent issued thereon.

Japanese Language Declaration

委任状：私は下記の米国特許商標局（USPTO）顧客番号のもとに記載されるSUGHRUE MION法律事務所のすべての弁護士を、同顧客番号のもとに記載される個々の弁護士はSughrue Mion法律事務所のみ
の自由裁量に基づき変更され得ることを認識した上で、本特許出願の手続きおよびそれに関わる米国特許商標局との業務を遂行する弁護士として指名し、本特許出願に関するすべての通信が同USPTO顧客番号のもとに提出された住所宛に送付されることを要請します。

POWER OF ATTORNEY: I hereby appoint all attorneys of SUGHRUE MION, PLLC who are listed under the USPTO Customer Number shown below as my attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, recognizing that the specific attorneys listed under that Customer Number may be changed from time to time at the sole discretion of Sughrue Mion, PLLC, and request that all correspondence about the application be addressed to the address filed under the same USPTO Customer Number.

STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 C.F.R. §1.69(b):

The declaration and power of attorney is an accurate translation of the corresponding English language declaration and power of attorney.

Signature

Date

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

電話連絡は下記へ：

SUGHRUE MION, PLLC
(202) 293-7060

Direct Telephone Calls to:

SUGHRUE MION, PLLC
(202) 293-7060

NAME OF SOLE OR FIRST INVENTOR:

唯一あるいは第一の発明者名

Susumu Kayama

Given Name (first and middle [if any])

名(名およびミドルネーム[該当する場合])

Susumu

Family Name or Surname

姓

Kayama

Inventor's signature

発明者の署名

Susumu Kayama

Date

日付

March 23, 2005

Residence:

住所:

Toyama-shi, Toyama, Japan

Citizenship

国籍

Japanese

Mailing Address: C/O SHOWA TITANIUM CO., LTD.,

郵送先:

3-1, Nishinomiyamachi, Toyama-shi, Toyama 931-8577, Japan

NAME OF SECOND INVENTOR:

第二の発明者名:

Hisao Kogoi

Given Name (first and middle [if any])

名(名およびミドルネーム[該当する場合])

Hisao

Family Name or Surname

姓

Kogoi

Inventor's signature

発明者の署名

Hisao Kogoi

Date

日付

March 23, 2005

Residence:

住所:

Toyama-shi, Toyama, Japan

Citizenship

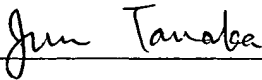
国籍

Japanese

Mailing Address: C/O SHOWA TITANIUM CO., LTD.,

郵送先:

3-1, Nishinomiyamachi, Toyama-shi, Toyama 931-8577, Japan

NAME OF THIRD INVENTOR: 第三の発明者名:			Jun Tanaka		
Given Name (first and middle [if any]) 名 (名およびミドルネーム[該当する場合])			Jun		
Family Name or Surname 姓			Tanaka		
Inventor's signature 発明者の署名					
Date 日付			March 23, 2005		
Residence: 住所:			Chiba-shi, Chiba, Japan		
Citizenship 国籍			Japanese		
Mailing Address: 郵送先: C/O Corporate R&D Center, SHOWA DENKO K.K., 1-1, Ohnodai 1-chome, Midori-ku, Chiba-shi, Chiba 267-0056, Japan					
NAME OF FOURTH INVENTOR: 第四の発明者名:					
Given Name (first and middle [if any]) 名 (名およびミドルネーム[該当する場合])			Family Name or Surname 姓		
Inventor's signature 発明者の署名			Date 日付		
Residence: 住所:			Citizenship 国籍		
Mailing Address: 郵送先:					
NAME OF FIFTH INVENTOR: 第五の発明者名:					
Given Name (first and middle [if any]) 名 (名およびミドルネーム[該当する場合])			Family Name or Surname 姓		
Inventor's signature 発明者の署名			Date 日付		
Residence: 住所:			Citizenship 国籍		
Mailing Address: 郵送先:					
NAME OF SIXTH INVENTOR: 第六の発明者名:					
Given Name (first and middle [if any]) 名 (名およびミドルネーム[該当する場合])			Family Name or Surname 姓		
Inventor's signature 発明者の署名			Date 日付		
Residence: 住所:			Citizenship 国籍		
Mailing Address: 郵送先:					
NAME OF SEVENTH INVENTOR: 第七の発明者名:					
Given Name (first and middle [if any]) 名 (名およびミドルネーム[該当する場合])			Family Name or Surname 姓		
Inventor's signature 発明者の署名			Date 日付		
Residence: 住所:			Citizenship 国籍		
Mailing Address: 郵送先:					

Supplemental Priority Data Sheet
優先権に関する追補データシート

Additional prior foreign applications:
追加の先行外国特許出願：

Application Number(s) 出願番号	Country 国名	Filing Date 出願日	Priority Claimed? 優先権の主張?	
			Yes 有り	No 無し
2003-197672 (Pat. Appln.)	Japan	16/July/2003	<input type="checkbox"/>	<input type="checkbox"/>
2003-320123 (Pat. Appln.)	Japan	11/September/2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
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			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

Additional provisional applications:
追加的仮出願：

Application Number(s) 出願番号	Filing Date 出願日

Additional U.S. or International applications:
追加の米国または国際出願:

Application Number(s) 出願番号	Filing Date 出願日	Status: patented, pending, abandoned (状態: 特許成立済、係属中、放棄済)

U.S. ASSIGNMENT

IN CONSIDERATION of the sum of One Dollar (\$1.00), and of other good and valuable consideration paid to the undersigned inventor(s) (hereinafter "ASSIGNOR") by

(Insert
ASSIGNEE's
Name(s)
Address(es))

SHOWA DENKO K. K.

13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8518, Japan

(hereinafter "ASSIGNEE"), the receipt of which is hereby acknowledged, the undersigned ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to the invention entitled

(Title of
Invention)

TITANIUM OXIDE FOR DYE-SENSITIZED SOLAR CELLS

relating to International Patent Application PCT/JP 03 / 12554 and/or for which application for Letters Patent of the United States was executed on even date herewith or, if not so executed, was:

(Insert date
of execution
of application,
if not
concurrent)

(a) executed on _____ ;

(b) filed on _____ ,
Serial No. _____ / _____ ;

(_____) is hereby authorized to insert in (b) the specified data, when known.

and to said application and all Letters Patent(s) of the United States granted on said application and any continuation, division, renewal, substitute, reissue or reexamination application based thereon, for the full term or terms for which the said Letters Patent(s) may be granted and including any extensions thereof (collectively, hereinafter, "said application(s) and Letters Patent(s)").

The ASSIGNOR agree(s), when requested by said ASSIGNEE and without charge to but at the expense of said ASSIGNEE, to do all acts which the ASSIGNEE may deem necessary, desirable or expedient, for securing, maintaining and enforcing protection for said invention, including in the preparation and prosecution of said application(s) and the issuance of said Letters Patent(s), in any interference, reissue, reexamination, or public use proceeding, and in any litigation or other legal proceeding which may arise or be declared in relation to same, such acts to include but not be limited to executing all papers, including separate assignments and declarations, taking all rightful oaths, providing sworn testimony, and obtaining and producing evidence.

IN WITNESS WHEREOF, the undersigned inventor(s) has (have) affixed his/her/their signature(s).

(Signatures)

1) <u>Susumu Kayama</u> (SIGNATURE)	Susumu Kayama (TYPE NAME)	March 23, 2005 (DATE)
2) <u>Hisao Kogoi</u> (SIGNATURE)	Hisao Kogoi (TYPE NAME)	March 23, 2005 (DATE)
3) <u>Jun Tanaka</u> (SIGNATURE)	Jun Tanaka (TYPE NAME)	March 23, 2005 (DATE)
4) _____ (SIGNATURE)	_____ (TYPE NAME)	_____ (DATE)